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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/575,411

Applicant(s)

BODLAENDER, MAARTEN PETER

Examiner

NICOLA RADONIC

Art Unit

4192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-21 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 10 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/CD/CD)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Objections Drawings

1. The drawings are objected to because there are no text labels on the blocks in Fig. 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1,2,3,5,6,8,13-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Laitinen (US 6091826).**

4. **As per claim 1 Laitinen teaches:** A network (100) comprising: a first network element (103) comprising: means for communicating a physical characteristic message comprising information related to at least one physical characteristic of the first network element (103) **(Laitinen column 1 approx lines 55-67 has a central CPU send out audio information to each remote speaker)**; and a second network element (105) comprising: a sensor (117) for determining physical sensor information related to a physical characteristic of a physical environment of the second network element (105) **(Laitinen column 9 approx lines 53-62 has remote speakers that send back position information and proximity information for nearby persons)**; a receiver (111, 113) for receiving the physical characteristic message from the first network element (103) **(Laitinen column 5 approx lines 28-32 describes the use of wired or wireless network connections to exchange status information from the remote speakers to the CPU to monitor speaker conditions)**; and means (115) for determining a physical context characteristic in response to the received physical

characteristic message and the physical sensor information (**Laitinen column 5 approx lines 32-34 describes the CPU selecting information to send to the speaker based on monitored conditions**).

5. **As per claim 20 Laitinen teaches:** A network element (105) for a network (100) comprising: a sensor (117) for determining physical sensor information related to a physical characteristic of a physical environment of the network element (105) (**Laitinen column 9 approx lines 53-62 has remote speakers that send back position information and proximity information for nearby persons**); a receiver (111, 113) for receiving a physical characteristic message from a different network element (103, 107) (**Laitinen column 7 approx line 15-19 describes speakers with interface circuits to monitoring devices near the speakers**), the physical characteristic message comprising information related to at least one physical characteristic of the different network element (103, 107) (**Laitinen column 6 approx line 30-34 measurement of sound pressure near the speaker**); and means (115) for determining a physical context characteristic in response to the received physical characteristic message and the physical sensor information (**Laitinen column 7 approx lines 13-35 where a speaker contains a DSP and uses it to calculate speaker settings based on data from multiple local environmental sensors and configured parameters, and to incorporate this into filtering algorithms to shape the speaker audio response**) .

6. **As per claim 21 Laitinen teaches:** A method of operation in a network (100) **(Laitinen column 3 approx lines 55-67 describes a network of a CPU and remote speakers, where the CPU provides sources of audio data and controls the speakers in response to feedback from the speakers)** comprising the steps of: communicating from a first network element (103) a physical characteristic message comprising information related to at least one physical characteristic of the first network element (103) **(Laitinen column 8 approx lines 23-28 where the loudspeaker sends radar data back to the CPU)**; and at a second network element (105) performing the steps of: determining physical sensor information from a sensor (117), the physical sensor information being related to a physical characteristic of a physical environment of the second network element (105) **(Laitinen column 6 approx lines 20-24 where the monitoring devices such as radar and sound pressure are processed in a DSP at the loudspeaker)**; receiving the physical characteristic message from the first network element (103); and determining a physical context characteristic in response to the received physical characteristic message and the physical sensor information **(Laitinen column 7 approx lines 13-35 where a speaker contains a DSP and uses it to calculate speaker settings based on data from multiple local environmental sensors which are the various network elements, and previously configured speaker parameters, and to incorporate this into filtering algorithms to shape the speaker audio response).**

7. **As per claim 2 Laitinen teaches:** A network as claimed in claim 1 (see **treatment of claim 1**) wherein the at least one physical characteristic comprises information of a physical property of the first network element (103) (**Laitinen column 6 approx lines 30-36 ambient sound pressure is measured at the proximity of the speaker and is transmitted back to the CPU**).

8. **As per claim 3 Laitinen teaches:** A network as claimed in claim 1 (see **treatment of claim 1**) wherein the at least one physical characteristic comprises a visual property of the first network element (103) (**Laitinen column 7 approx lines 43-45 describes displaying text or graphic data at the speakers, and while this is a description of the display operation it implies an image source either file data or real time image capture**).

9. **As per claim 5 Laitinen teaches:** A network as claimed in claim 1 (see **treatment of claim 1**) wherein the at least one physical characteristic comprises a current characteristic of a physical signal being transmitted by the first network element (103) (**Laitinen column 6 approx lines 30-36 ambient sound pressure is measured at the proximity of the speaker and is transmitted back to the CPU, and the interpretation of a physical characteristic implies the physical characteristic is converted back to digital form for transmission and processing**).

10. **As per claim 6 Laitinen teaches:** A network as claimed in claim 5 (see **treatment of claim 5**) wherein the physical characteristic message comprises a data representation of the physical signal (**Laitinen column 6 approx lines 30-36 ambient sound pressure is measured at the proximity of the speaker and is transmitted back to the CPU**).

11. **As per claim 8 Laitinen teaches:** A network as claimed in claim 5 (see **treatment of claim 5**) wherein the first network element (103) comprises means for embedding a marker in the physical signal and the physical characteristic message comprises information related to the marker (**Laitinen column 8 approx lines 34-42 where the marker in the data is the address field including a speaker number used to direct D/A output to a specific speaker**).

12. **As per claim 13 Laitinen teaches:** A network as claimed in claim 1 (see **treatment of claim 1**) wherein the first network element (103) furthermore comprises a movement detector and means for updating the physical characteristic message in response to a detected movement (**Laitinen column 6 approx lines 45-54 uses Doppler radar to detect people moving in the vicinity and sends messages to the CPU to change the delivered message**).

13. **As per claim 14 Laitinen teaches:** A network as claimed in claim 1 (see **treatment of claim 1**) wherein the physical context characteristic comprises a location

of the first network element (103) **(Laitinen column 3 approx lines 23-26 the loudspeakers are able to detect location information and send it back to the CPU on the network).**

14. **As per claim 15 Laitinen teaches:** A network as claimed in claim 1 **(see treatment of claim 1)** wherein the network (100) further comprises a plurality of network elements (103, 107) operable to communicate physical characteristic messages **(Laitinen column 8 approx lines 47-60 where networked speakers mounted on shopping carts identify the locations of the carts and send that information back to the CPU)** and wherein the second network element (105) further comprises means for determining a physical location map of a plurality of network elements (103, 107) in response to the physical sensor information and received physical characteristic messages **(Laitinen column 8 approx lines 43-46 stores the location information in tables, which represent parts of a physical location map and approx lines 23-28 where a combination radar device and A/D converters sense locations of people and pass the sensed data back to the CPU).**

15. **As per claim 16 Laitinen teaches:** A network as claimed in claim 1 **(see treatment of claim 1)** wherein the means for determining a physical location map is further operable to determine the physical location map in response to a movement of the second network element (105) **(Laitinen column 8 approx lines 42-54 mobile**

speakers mounted on shopping carts report their locations back to the CPU which stores a table of locations as part of a mapping system).

16. **As per claim 17 Laitinen teaches:** A network as claimed in claim 1 (see treatment of claim 1) wherein the first network element (103) further comprises means for presenting an information signal to a user (Laitinen column 8 approx lines 53-58 where the CPU decides what audio information to send to the target speaker based on the location of the cart and speaker).

17. **As per claim 18 Laitinen teaches:** A network as claimed in claim 1 (see treatment of claim 1) wherein the network (100) is a partly wireless network (Laitinen column 4 approx lines 4-10 some speakers are connected by wires and some by wireless means both infra-red and radio signals).

18. **As per claim 19 Laitinen teaches:** A network as claimed in claim 1 (see treatment of claim 1) wherein the network (100) is a dynamic network (Laitinen column 10 approx lines 29-38 speakers can be arranged in groups and representative units communicate with the CPU implying dynamic reconfiguration of the network of devices).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. **Claims 4,9,10,11,12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Laitinen** as applied to **claim 1** above, and further in view of **Smith** (7274301).

21. **As per claim 4 Laitinen teaches:** A network as claimed in claim 1 (**see treatment of claim 1**).

Laitinen does not expressly disclose: wherein the physical characteristic message comprises an image of at least part of the first network element (103).

Laitinen does not claim a device attached to the network capable of making digital images of that network element.

Smith teaches: wherein the physical characteristic message comprises an image of at least part of the first network element (103) (**Smith column 2 approx lines 15-22 describes a digital video camera attached to a network as one of several peripheral devices**).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to connect the digital video camera from Smith to the network from Laitinen. Digital video is represented by digital data just as digital audio is represented by digital data, and since Laitinen already handles both

digital audio data and graphics images it would have been straight forward to include the digital camera from Smith into the network allowing imaging of the network components.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Laitinen and Smith to obtain the invention as specified in claim 4.

22. As per claim 9 Laitinen teaches: A network as claimed in claim 1 (see treatment of claim 1).

Laitinen does not expressly disclose: wherein the sensor (117) is an image sensor. Laitinen does not claim a device attached to the network capable of making images.

Smith teaches: wherein the sensor (117) is an image sensor (Smith column 4 approx lines 27-30 describes peripheral devices which produce digital data on the network such as video cameras).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to connect the digital video camera from Smith to the network from Laitinen. Digital video is represented by digital data just as digital audio is represented by digital data, and since Laitinen already handles both digital audio data and graphics images it would have been straight forward to include the digital camera from Smith into the network to sense visual images.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Laitinen and Smith to obtain the invention as specified in claim 9.

23. As per claim 10 Laitinen teaches: A network as claimed in claim 1 (see treatment of claim 1).

Laitinen does not expressly disclose: wherein the means (115) for determining is operable to determine the physical context characteristic by a visual detection algorithm responsive to the physical characteristic message (**Laitinen does not claim determination of physical context through a visual identification algorithm**).

Smith teaches: wherein the means (115) for determining is operable to determine the physical context characteristic by a visual detection algorithm responsive to the physical characteristic message (**Smith column 2 approx lines 49-53 discusses including electronic identification through retina scan or fingerprint matching, which implies processing of image data with an algorithm that does matching of fingerprints or retina scans with stored reference data, and uses this for user identification and access control**).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to attach a fingerprint reader or digital camera with retina scan matching software to the network described in Laitinen. Since Laitinen already handles both digital audio data, and graphics images, and has DSPs

capable of data processing at its remote speakers it would have been straight forward to include into the network the peripheral devices suggested in Smith to perform these visual detection tasks.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Laitinen and Smith to obtain the invention as specified in claim 10.

24. **As per claim 11 Laitinen teaches:** A network as claimed in claim 1 (see treatment of claim 1) .

Laitinen does not expressly disclose: wherein the visual detection algorithm is an object recognition algorithm (**Laitinen does not use a visual detection algorithm that is an object recognition algorithm**).

Smith teaches: wherein the visual detection algorithm is an object recognition algorithm (**Smith column 2 approx lines 49-53 discusses electronic identification through finger print scan, which implies processing of image data, with an algorithm that does matching of fingerprint images with stored reference data to identify individuals**).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to attach a fingerprint reader described in Smith to the network described in Laitinen to provide the object recognition function. The object detected would have been a finger, identified by its fingerprint image.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Laitinen and Smith to obtain the invention as specified in claim 11.

25. **As per claim 12 Laitinen teaches:** A network as claimed in claim 1 (see treatment of claim 1) .

Laitinen does not expressly disclose: wherein the sensor (117) is an audio sensor (Laitinen discloses sound pressure sensors near its speaker systems but not audio sensors).

Smith teaches: wherein the sensor (117) is an audio sensor (Smith column 2 approx lines 55-58 specifies an intercom device, which would allow transmittal of voice audio data from the point of the intercom device).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to connect intercom devices from Smith in the network of Laitinen, which is already capable of handling audio data, to provide the ability to sense audio.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Laitinen and Smith to obtain the invention as specified in claim 12.

26. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Laitinen** as applied to **claim 5** above, and further in view of **Smith** (7274301).

27. **As per claim 7 Laitinen teaches:** A network as claimed in claim 5 (**see treatment of claim 5**) .

Laitinen does not expressly disclose: wherein the physical signal is an audiovisual signal (**Laitinen does not claim that physical input signals are audiovisual signals**).

Smith teaches: wherein the physical signal is an audiovisual signal (**Smith column 2 approx lines 19-22 describes a digital video camera attached to the network**).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the digital camera from Smith with the network of Laitinen to make the physical input signal an audiovisual signal. Digital video is represented by digital data just as digital audio is represented by digital data, and since Laitinen already handles both digital audio data and graphics images it would have been straight forward to include the digital camera from Smith on the network, satisfying audio visual input criteria for this claim.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Laitinen and Smith to obtain the invention as specified in claim 7.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLA RADONIC whose telephone number is (571)270-5246. The examiner can normally be reached on IFW work schedule, with some Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj Kumar can be reached on (571) 272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NR
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Supervisory Patent Examiner, Art Unit 4192